

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

(Includes Reference to PCT International Applications)

ATTORNEY'S DOCKET NUMBER

388-991024

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

FOCUS TYPE LONGITUDINAL WAVE ULTRASONIC PROBE AND ULTRASONICFLAW EVALUATING APPARATUS FOR POLYMER MATERIAL INSPECTION

the specification of which (check only one item below):

☒ is attached hereto.☐ was filed as United States application

Serial No. _____

on _____

and was amended

on _____ (if applicable).

☒ was filed as PCT international applicationNumber: PCT/JP98/03962on September 3, 1998

and was amended under PCT Article 19

on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

COUNTRY (if PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
Japan	Pat. 9-242290	08/September/1997	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Japan	Pat. 9-300348	31/October/1997	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Japan	Pat. 9-300349	31/October/1997	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Japan	Pat. 9-356736	25/December/1997	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
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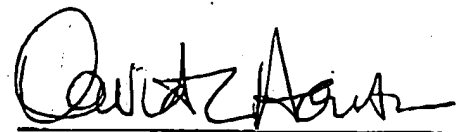
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so. of spec. 21 Claims 3 Abstract 1 Sheets of Dwgs. 8
Declaration Yes Small Entity Statement Yes ☐ No ☒
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FACSIMILE INFORMATION SHEET

Name of Individual: Examiner Hezron Williams

Company: United States Patent and Trademark Office

City and State: Alexandria, VA

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Date Transmitted: August 18, 2003

Message:

Our File No. 388-991024

Patent Application No. 09/508,024

Attached please find a copy of the entire application as filed on
March 6, 2000.

If you do not receive all pages, please call back as soon as possible. The number is (412) 471-8815

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FOCUS TYPE LONGITUDINAL WAVE ULTRASONIC
PROBE AND ULTRASONIC FLAW
EVALUATING APPARATUS FOR POLYMER MATERIAL INSPECTION

ABSTRACT OF THE INVENTION

5 An ultrasonic inspection probe includes a curved piezoelectric element and a matching material having an input end surface in close contact with a concave surface of the curved piezoelectric element and an output end surface for fitting to a surface of a polymer material acting as a test object. The matching material has an acoustic impedance matched to an acoustic impedance of the test object or an acoustic impedance of the curved piezoelectric element, or both. A flaw evaluating apparatus
10 of the probe includes two gate circuits and evaluating circuits connected thereto for gating ultrasonic reflection echoes and evaluating sound velocity variations of the ultrasonic reflection echoes.

FORM PTO-1595

(Rev. 6-93)

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To the Assistant Commissioner for Patents:
Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Toshimichi KITAOKA
Fumio INOUE
Hiroki TODA

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date: June 4, 1999

2. Name and address of receiving party(ies)

Name: Osaka Gas Co., Ltd.

Internal Address: _____

Street Address: 1-2, Hiranomachi 4-chomeChuo-ku, Osaka, Japan

City: _____

State: _____

ZIP: _____

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application,
the execution date of the application is: June 4, 1999

A. Patent Application No. (s)

B. Patent No. (s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Russell D. OrkinInternal Address: Webb Ziesenheim LogsdonOrkin & Hanson, P.C.Street Address: 700 Koppers Building436 Seventh AvenueCity: Pittsburgh State: PA ZIP: 15219-18186. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41) \$ 40.00☒ Enclosed with filing fee☐ Authorized to be charged to deposit account

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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Paul M. Reznick

Name of Person Signing

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Paul M. Reznick
SignatureMarch 6, 2000

Date

Total number of pages including cover sheet, attachments and document 3

Mail documents to be recorded with required cover sheet information to:
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ASSIGNMENT

WHEREAS, Toshimichi KITAOKA, Fumio INOUE and Hiroki TODA

whose post office addresses appear below (hereinafter (collectively) referred to as ASSIGNOR), has (have) invented certain new and useful improvements in an

FOCUS TYPE LONGITUDINAL WAVE ULTRASONIC PROBE AND ULTRASONIC
(TITLE OF INVENTION)

FLAW EVALUATING APPARATUS FOR POLYMER MATERIAL INSPECTION

(hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed on _____, Serial Number _____;

WHEREAS, OSAKA GAS CO., LTD.

whose post office address is 1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan

(and)

whose post office address is _____
(hereinafter (collectively) referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASSIGNOR, by these presents do sell, assign and transfer until said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE's expense, to identify and communicate to ASSIGNEE at ASSIGNEE's request documents and information concerning the invention that are within ASSIGNOR's possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR's obligations under this instrument shall extend to ASSIGNOR's heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE's sole use and behoof; and for the use and behoof of ASSIGNEE's legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

☒ See following pages for additional assignors

Full Name of First Assignor	Toshimichi KITAOKA		
Residence Address - Street	c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome, Chuo-ku		
City	Osaka		
State or Country	Japan	Zip	
DATE	June 4, 1999	SIGNATURE	北岡 利道

ASSIGNMENT

Page 2

Full Name of 2nd Assignor	
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DATE	SIGNATURE
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Full Name of 3rd Assignor	
Hiroki TODA	
Residence Address - Street	
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Japan	
Zip	
DATE	SIGNATURE
June 4, 1999	戸田 裕巳

Full Name of 4th Assignor	
Residence Address - Street	
City	
State or Country	
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Full Name of 5th Assignor	
Residence Address - Street	
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PATENT APPLICATION/PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

ATTORNEY'S DOCKET NUMBER

TOSHIMICHI KITAOKA,
FUMIO INOUE, and
HIROKI TODA

388-991024

PCT/JP98/03962

ENTITLED

"FOCUS TYPE LONGITUDINAL WAVE ULTRASONIC PROBE AND ULTRASONIC
FLAW EVALUATING APPARATUS FOR POLYMER MATERIAL INSPECTION"

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